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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/577,251

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Federico Mancosu

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EXAMINER

NGHIEM, MICHAEL P

ART UNIT

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/577,251	<b>Applicant(s)</b> MANCOSU ET AL.	
	<b>Examiner</b> MICHAEL P. NGHIEM	<b>Art Unit</b> 2863	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 26 April 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 52-104 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 52,55,56,60,69-71,74,75,79,90,96,97 and 102-104 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 April 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>4-26-06</u> .   | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

The preliminary amendment April 26, 2006 has been considered.

### ***Information Disclosure Statement***

The information disclosure statement filed on April 26, 2006 fails to comply with 37 CFR 1.98(a)(3) because it does not include a concise explanation of the relevance, as it is presently understood by the individual designated in 37 CFR 1.56(c) most knowledgeable about the content of the information, of each patent listed that is not in the English language. It has been placed in the application file, but the information referred to therein has not been considered. Reference DE 195 37 257 was not submitted with an English translation.

### ***Specification***

The disclosure is objected to because of the following informalities: References to the claims (e.g., see page 3) should be deleted.

Appropriate correction is required.

### ***Drawings***

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The drawings filed on April 26, 2006 are not acceptable because:

1/ Lines, characters, and numbers are not uniformly thick and well-defined, 37 CFR

1.84(l): See Fig. 5

2/ Numbers, letters are small, 37 CFR 1.84(p)(3): See Figs. 6 and 7.

### ***Claim Objections***

Claim 52, 72, 79-83, 85, 91, and 97-99 are objected to because of the following informalities:

- claim 52, "it" (line 4) should be -- the tyre's --.

- claims 72, 79-83, 85, 91, and 97-99, "the processing step" should be -- the processing stage --.

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claims 52, 55, 56, 60, 69-71, 74, 75, 79, 90, 96, 97, and 102-104 are rejected under 35 U.S.C. 102(e) as being anticipated by Mancosu et al. (US 2004/0064219).

Regarding claims 52, 71, and 97, Mancosu et al. discloses a method and system for determining the roughness of a rolling surface of a tyre (1) (monitoring events, Abstract, lines 13-16; events include wear of the tyre tread, paragraph 0052, lines 1-12, which is indicative of rolling surface roughness), comprising the steps of:

- providing a first signal representative of the motion of at least one point of the tyre during its rolling on the surface (provide first signal to processing means, Abstract, lines 6-9); and

- processing the first signal for providing an output indicative of the roughness of said rolling surface of the tyre (processing means detects first signal for monitoring events, Abstract, lines 9-16; events include wear of the tyre tread, paragraph 0052, lines 1-12, which is indicative of rolling surface roughness).

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Regarding claims 55 and 74, Mancosu et al. discloses the first signal is an acceleration signal representative of the acceleration of said at least one point of the tyre during rolling of the tyre on the surface (detecting acceleration by detecting the presence of the sensor signal, paragraph 0355, lines 2-7).

Regarding claims 56 and 75, Mancosu et al. discloses said acceleration signal comprises at least one of the following accelerations of at least one point of the tyre longitudinal acceleration (longitudinal acceleration, paragraph 0355, lines 3-4).

Regarding claim 60, Mancosu et al. discloses the processing step comprises an estimation step of the angular velocity of the tyre during the rotation of the tyre (paragraph 0397, lines 4-8).

Regarding claim 69, Mancosu et al. discloses a method for controlling the behaviour of a vehicle to which at least one tyre is mounted (paragraph 0221), comprising the steps of: determining information relating to the roughness of a rolling surface of the tyre (determining events including tread wear, paragraph 0052) and making available the information relating to the roughness to a vehicle control system (8, Fig. 1; paragraph 0221).

Regarding claim 70, Mancosu et al. discloses said control system is an Anti Blocking System (paragraph 0437, lines 2-3).

Regarding claim 71, Mancosu et al. further discloses the tyre (1) to be mounted onto a vehicle (paragraph 0201, line 1); a sensor device (7, Fig. 1; first sensor, Abstract, line 6) for providing the first signal (Abstract, lines 6-7); and a processing stage (processing means, Abstract, line 7) of the first signal (Abstract, lines 6-7, 9-11).

Regarding claim 90, Mancosu et al. discloses said sensor device (7) is capable of being fixed to the tyre (1, Fig. 1).

Regarding claim 96, Mancosu et al. discloses said sensor device is capable of being fixed to a supporting rim of the tyre (paragraph 0081).

Regarding claim 102, Mancosu et al. discloses the sensor device comprises a casing (casing of 7, Fig. 1) fixed to one wall of the inside of the tyre (1, Figs. 1, 2) by means of a fixing element (its inherent to use a fixing element to attach sensor 7 to tyre 1 as shown in Fig. 2).

Regarding claim 103, Mancosu et al. discloses at least one additional sensor device operatively associable with the tyre for providing an additional correspondent signal representative of the motion of at least one additional point of the tyre during the rolling of said tyre on the surface (second sensor, paragraph 0066, lines 1-12).

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Regarding claim 104, Mancosu et al. discloses a wheel (Fig. 2) comprising a supporting rim (15) and a tyre (1) associated with said supporting rim (Fig. 2).

### ***Allowable Subject Matter***

Claims 53, 54, 57-59, 61-68, 72, 73, 76-78, 80-89, 91-95, and 98-101 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

### ***Reasons For Allowance***

The **combination** as claimed wherein a method and system for determining the roughness of a rolling surface of a tyre comprising a frequency filtering step of the first signal for extracting a second signal representative of motion components of said at least one point due to the deformations undergone by the tyre during the rolling (claims 53, 72, 98) or the first signal is representative of the motion of said at least one point during a revolution of the tyre, determining first temporal/angular coordinates corresponding to a first portion of the first signal associated with a step of the rolling of the tyre, wherein said at least one point is in a zone of contact of the tyre with the rolling surface; and determining at least on second temporal/angular coordinate corresponding to a second portion of the first signal associated with a step of the rolling



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of the tyre wherein said at least one point is in a zone contiguous with said contact zone (claims 57, 76) or calculation step of the angular velocity on the basis of at least one value of the centripetal acceleration of the tyre and on the basis of the radius of the tyre (claims 61, 80) is not disclosed, suggested, or made obvious by the prior art of record.

### ***Contact Information***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Nghiem whose telephone number is (571) 272-2277. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Drew Dunn can be reached on (571) 272-2312. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Michael P. Nghiem/

Primary Examiner, GAU 2863

August 28, 2009